

Exploring the strategies of nurses in giving health teachings among diabetes mellitus (DM) patients

Ralph Jasper G. Soriano^{1,2}, Nazel D. Adante^{1,2}, Jhezel Giana M. Agbuya^{1,2}, Lee Ann B. Beñales^{1,2}, Izzy R. Dela Cruz^{1,2}, Jon Christopher A. Gatus^{1,2}, Amanda Jhulia Mari N. Salaya^{1,2}, Michael I. Aggari^{1,2}, Joel John Dela Merced^{1,2}, Annabelle P. Flores^{1,2}, Trinidad J. Salcedo^{1,2}, Cecile F. Guevarra^{1,2}, Mary Ann E. Lopez^{1,2}, Liza May B. Jecino^{1,2}, Arby James E. Abonalla^{1,2}, Samuel C. Sumilang^{1,2}

College of Nursing, Our Lady of Fatima University - Quezon City, Philippines¹
Dr. Jose N. Rodriguez Memorial Hospital and Sanitarium

Corresponding author:

Name: Ralph Jasper G. Soriano
Address: Our Lady of Fatima
University - Quezon City
Campus, Fe Street, St. Agatha
Building
E-mail:
rgsoriano1892qc@student.fatima.edu.ph

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Abstract

Introduction: Effective health teaching has been shown to have a major impact on patients' behavior and disease management. The strategies used by nurses to educate patients with diabetes mellitus, with an emphasis on the impact of the nurses' experiences in providing health teaching on diabetes management, were explored by the researchers. **Objective:** The goal of this study is to provide the best strategy based on insights and experiences of the nurses in giving health teachings for the management of diabetes mellitus. **Method:** Phenomenological approach using Colaizzi's descriptive method was utilized and conducted through verbal interview. Seven (7) registered nurses who had prior experience in educating patients with diabetes mellitus from a well-known public health institution located in Quezon City participated in data collection. An open-ended unstructured subjective type questionnaire that was prepared by the researchers was used to gather the data. **Result:** The significant findings of this study revealed nine (9) key themes in health teaching, covering its importance, strategies, challenges, addressing challenges, adapting strategies to patient needs, family involvement, impact of family involvement, strategies to persuade colleagues to adopt health teaching methods, and effective teaching strategies that the nurses employ in delivering health education to diabetes mellitus patients. The results showed that challenges like beliefs, socioeconomic status, and psychological problems could arise. **Conclusion:** This study concentrated on the utmost importance of nurses' experiences in helping to recognize and comprehend various strategies in health teaching through which they can help patients with diabetes mellitus find appropriate self-management techniques, thereby enhancing the quality of patient care.

Keywords:

Diabetes Management, Diabetes Mellitus, Health Teaching, Nurses



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INTRODUCTION

Health teaching is crucial for enhancing patients' quality of life and is a vital part of healthcare. Kosiba et al. (2022) emphasize the importance of health education for children and youth, stating that discussing treatments and fostering holistic health skills can encourage patient cooperation. According to the statistics of the World Health Organization, about 422 million of the population worldwide are diagnosed with diabetes. The prevalence of the proliferation of diabetes has been increasing over time. According to Martos-Carbrera et al. (2021), each 1% reduction in HbA1c in patients with poorly managed Diabetes Mellitus reduces the risk of early death by 21% and microvascular complications by 37%. As a result, nurses aid patients in self-management of their illnesses, enhancing decision-making for therapeutic goals and reducing associated suffering.

Kumar et al. (2022) identified that proper compliance with dietary guidelines, self-care management, physical activities, and regimens might reduce the progression of the disease. In this context, nurses play a crucial role in disseminating this information to patients during check-ups, follow-ups, and counseling, making them aware of the disease and its consequences. The researchers observed that DM patients with low health literacy have increased chances of ineffective compliance to regimens which contradicts with the role of nurses in ensuring proper, standardized, and clarified education about the disease. In order to enhance the chances that the effectiveness of the treatment will progress into a well-defined holistic health of the patient, nurses utilized various strategies to accommodate patients regarding health teaching, which have proven effective. However, in the context of diabetes, Hurst et al. (2020) reiterated that patients diagnosed with the said disease find it hard to maintain and adhere to the treatment provided due to cultural barriers, lack of funding, and patients being in denial for having DM and the fact that they need to change their lifestyle thus resulting in high blood glucose. With that, the relationship between health teaching strategies and self-management, self-efficacy, and compliance to treatment of DM patients is not well understood.

Therefore, this study aimed to explore the strategies of health teaching patients with Diabetes Mellitus. This paper was solely based on nurses' preparedness, knowledge of diabetes mellitus, and involvement in improving the patient's quality of life regarding health teaching. Hence, this study is crucial

for registered and student nurses to enhance health teaching methods for patients with diabetes mellitus, ensuring they receive accurate and comprehensive information about their disease, and determining appropriate reinforcement for effective knowledge delivery. The focus of this study was to answer the question "What are the strategies of nurses in giving health teaching among Diabetes Mellitus patients?". Answering this will help to serve people, enhance health, promote health, and avert the progression of the disease. Effective communication and patient understanding fostered a strong rapport between the nurse and the client. Registered nurses advocate for a patient-centered strategy using technology and visual aids for treatment, maintenance, and lifestyle adjustments, which can improve patient outcomes when combined with ongoing encouragement and education.

Researchers suggest that accurate reinforcement enhances nurses' knowledge and proficiency, enhancing care delivery for patients with Diabetes Mellitus. This study can serve as a reference for future research on effective reinforcement in teaching patients, supporting productivity and fostering deeper understanding in healthcare.

METHOD

The researchers conducted a qualitative study using descriptive phenomenology to analyze nurses' strategies in health teaching for Diabetes Mellitus patients. Nola Pender's Health Promotion Theory was employed to understand patients' unique characteristics and behaviors, providing a framework for exploring the effectiveness of health interventions. The study aimed to explore the complex experiences of nurses and patients, identifying effective health teaching strategies while acknowledging the challenge of quantifying themes and patterns in qualitative data.

While the study does not introduce a new theory, it builds on existing frameworks such as Pender's theory and explores the practical application of these strategies in nursing care. This contribution enhances our understanding of how health promotion theories can be applied to patient education.

The study focuses on nurses' perceptions, ideas, and thoughts regarding their experiences in providing diabetes education. By analyzing these perspectives, the research identifies the factors influencing the success of health education and the strategies that enhance patient understanding and engagement in diabetes care. This reflection of

nurses' lived experiences is crucial in offering insight into patient care and the effectiveness of various educational approaches.

Furthermore, the researchers acknowledge their professional background in nursing and health education, which may have influenced the study's focus and interpretation of results. Although efforts were made to maintain objectivity, personal assumptions and professional experience could have shaped the data collection and analysis. To enhance the trustworthiness of the findings, strategies such as member checking and triangulation were employed, and future studies could benefit from further reflecting on how researcher characteristics might have influenced the findings.

The research locale is a tertiary hospital in Calocan City, established in 1940 under Commonwealth Act No. 161, which declared the Leprosarium a reservation area for hansenites and their families. The study focuses on 7 registered nurses with diabetes management and self-care health teaching experience, selected based on their insights through one-on-one interviews. The study employed a Non-Probability - Purposive Sampling Technique, selecting participants with specific characteristics to enhance results and strengthen the study's objectives. The small sample size of 7 was selected to yield the most results at the lowest cost.

While the sample size of 7 nurses was sufficient for gaining in-depth insights, it may limit the generalizability of the findings. The sample size is small, which raises concerns about the broader applicability of the results. Additionally, the study employed purposive sampling to ensure that participants had more than two years of experience in diabetes care, with data saturation guiding the sample size. Data saturation was reached as no new themes emerged during the interviews, which aligns with standard practices in qualitative research. Phenomenological studies typically involve sample sizes ranging from 6 to 10 participants, making this sample size appropriate for the context. However, it is acknowledged that a larger, more diverse sample could improve the generalizability of the results.

Furthermore, while member checking was used to validate the findings, the study could benefit from more detailed descriptions of the steps taken to ensure the trustworthiness of the data analysis. Future research could consider using additional techniques such as triangulation or peer debriefing to further enhance the rigor of the study.

Inclusion Criteria:

The researchers chose respondents who met the following requirements: registered nurses in a clinical setting, either male or female, with more than two years of medical-surgical nursing experience, willingness to cooperate throughout the study, and proficiency in English.

Exclusion Criteria:

Registered nurses with less than two years of medical-surgical nursing experience,

uncooperativeness, or lack of English language proficiency were excluded from the study.

Diversity of Participants:

While the participants shared similar professional backgrounds (all working in a tertiary hospital), they varied in age, gender, and educational qualifications, ensuring a range of perspectives relevant to the study's objectives.

The study obtained ethical approval from the Research Development and Innovation Center (RDIC) and the Institutional Ethics Review Committee (IERC) before commencing. Participants provided informed consent, ensuring their autonomy and understanding of the study's purpose, procedures, potential risks, and benefits. Confidentiality was maintained by anonymizing participant data, securing it on encrypted storage, and adhering to the Data Privacy Act of 2012. Only the research team and validators had access to the data, which will be deleted three years after the study's conclusion.

The study, completed in July 2024, involved structured interviews and survey questionnaires distributed to seven registered nurses in Metro Manila. Colaizzi's descriptive phenomenological method was used to analyze the data, ensuring credibility and reliability. To enhance the trustworthiness of the results, triangulation techniques were employed by incorporating multiple data sources, and participants engaged in member checking to verify the findings. Additionally, an audit trail was maintained throughout the data analysis process to ensure transparency and rigor. The Data Privacy Act of 2012 was followed, ensuring privacy and communication. The study aimed to identify the best health education approach for diabetes patients, focusing on ethical principles, altruism, satisfaction, and confidentiality. Researchers anonymized participants, assigned unique codes, and stored data securely. The principal investigator kept conversations private. Results were disseminated, promoting nursing health teaching strategies. Data was deleted three years later, ensuring integrity and credibility

RESULT

**THEME 1: IMPORTANCE OF HEALTH TEACHING
SUB-THEME 1.1: RAISING AWARENESS AND
EMPOWERMENT**

Table 1. Sub-theme: raising awareness and empowerment

Verbatim Responses

To answer question(s):

For you, how important is health teaching to a patient?

R1:

"Health teaching to a patient is fundamental"

because, uhm, it would make them aware of their uhh.. healthy bad habits. Okay, so it makes, it makes ano.. it change their lifestyle uhm, uhm.. process. Uhh, they will be aware of what to, you know, what to do, and what not to do regarding their physical health and diet.”

R2:

“Ahh, providing health teaching to the patient is important to empower the - uhh, their health status and to (improve) the chances of a positive outcome.”

R3:

“So, it is important because the patient will know more about managing their disease. What (medicine) should they drink, what should they do daily to become healthier and lessen the disease symptoms?”

R7:

“So, for me, your first question is how important health teaching is. Health teaching is so important, especially for those patients that, uhm, discovered that they have DM (Diabetes Mellitus) recently - because, here in the Hemodialysis unit, uh, it is one of our advocacy as a nurse is health teaching. Pre-, Intra-, and Post-Dialysis. So, many factors need to be considered in health teaching. So the DM (Diabetes Mellitus) has a lot of, uhm, much information that needs to be known about it because Diabetes Mellitus is the number one cause of chronic kidney disease. So, right there, uhm, health promotion is significant, as well as the awareness of the patients with regards to DM (Diabetes Mellitus).”

**THEME 2: STRATEGIES FOR HEALTH TEACHING
SUB-THEME 2.1: PATIENT-CENTERED APPROACH**

Table 2. Sub-theme: patient-centered approach

Verbatim Responses

To question(s):

What health teaching strategy are you applying to diabetes mellitus patients in order for them to comply with the regimen?

R3:

“So the (the) health teaching strategy we use is patient-centered. So, suppose we ‘uh’ teach the patients. In that case, we include, ‘uh’ - we make them understand what their disease is, what (medicine) they can intake, what are the limitations in foods, and what they can do in their households to lessen the disease or the ‘uh’ lower their sugar (level), and for it not too high. Alternatively, if it goes high, the su -, (sugar) ‘uh’ correct. The sugar will not go high “no’. Then we should always, ‘uh,’ what

do we call it? To check their sugar (level), we should include the family “no’, we should always– the involvement of their family regarding the.. for ‘uh’ in.. teaching method, health teaching method, for them to comply.”

R7:

“Okay, health strategy — health teaching strategy? Of course, you need to consider or assess the patient. What are the factors that they need to know, for example, with regards to ‘uhm,’ socioeconomics, and if they can, for example, sustain if they will have maintenance medications? Of course, you should consider it. At the same time, the ‘uhm’ level of understanding of the patient, if how we will explain to them that — in the way that they will understand you. Because most of our patients, especially here, are not – they are not that familiar with the terms that – if what are the – if what are things that they need to do if they have dis– those with a disease like DM (Diabetes Mellitus). So, you will first assess their socioeconomic status in the family; what is the family status? You will also see the root cause of why the patient acquired DM (Diabetes Mellitus).

SUB-THEME 2.2: USE OF VISUAL AIDS AND TECHNOLOGY

Table 3. Sub-theme: use of visual aids and technology

Verbatim Responses

To question(s):

What strategy in health teaching could help the patient fully understand the importance of a healthy lifestyle?

R5:

“In one-on-one (health-teaching), you will also provide visual aids, ‘uhm’ – the technology in this generation, you can use your cellphones, right? You can give them examples for those who use insulin who got their leg amputated. For your patients to adhere, you must show them the worst scenario that will encourage them to follow the regimen.

R6:

“Uhm, since we are now in the era where we are mostly, ‘uh,’ (uses) cellphones. ‘Uh,’ the interactions with TikTok are good, those TikTok... that. Tiktok, those videos. To those chi- (children), teenagers, maybe those, ‘uhm’ those characters? Those are good. On the other hand, for the elders, usually, it is good that the ‘uh’ your health teaching is visible to them, the ‘uhm’ is visible to them, what they need to eat, and things they need to watch out for, through videos. That is much better.”

Verbatim Responses

To question(s):

How can you modify their health education methods or strategies to suit their patients' varied needs and learning styles?

R6:

“Uhm, that is it, maybe those videos. More on videos because, nowadays, many (people) are fond of Tiktok ‘e,’ so it is much better if those (videos) are short only. Because it is not ‘uhh’ because if the videos are lengthy, the span (attention span) of the people ‘uhh’ they cannot understand the (videos). So it is much better if the video is only 30 minutes, 1 minute only. Just put it there, emphasize the things that they ‘uhm’ need to do.”

**THEME 3: CHALLENGES IN HEALTH TEACHING
SUB-THEME 3.1: NON-COMPLIANCE AND RESISTANCE**

Table 4. Sub-theme: non-compliance and resistance

Verbatim Responses:

To question(s):

What are the challenges encountered in delivering health teachings to diabetes mellitus patients?

R1:

“Challenges I could consider include the ‘uh’ and regimen compliance. Of course, they are hard-headed sometimes. Okay. Moreover, what else, ‘uh’ the challenge of warning them [is] what is the complication at the end of having diabetes mellitus. If you are not ‘uh,’ challenging yourself to improve yourself, or you know to comply with what is needed for you to improve the diabetes mellitus, it would turn out to be a worse complication. For example, what is it, like ‘uh,’ for healing, for healing ‘uh’.. for the healing process is the one ‘uh’ is the one complication that diabetes mellitus patients ‘uh’ face at times.”

R3:

“Uh, the challenge in giving health teaching towards DM patients is, of course, the ‘uh,’ like you are telling them not to eat sweets. So for them, they still secretly eat those. It is like they, what do you call this, did not, and the others cannot accept their illness. So, that is the biggest challenge if we persuade them they need to take this maintenance, right? Others may say, “Oh no, I will just.. take herbals.” Right? The others may choose herbal [and] they do not want their maintenance, or they will eat restricted foods. So those are the challenges there, but we need to.. explain everything, the possible outcomes once their blood sugar rises, like they can experience coma or worse if their blood sugar is high. However, as a health provider, we need to explain further their illness and

what they should do.”

R4:

“This is what I have been telling [you] during the previous years and not now; I think the challenge[s] is we have patients who are not that inclined when they have Diabetes Mellitus. [The] challenge[s] is that we have given them health teachings, but they still have not followed them. For example, when taking medications, they neglect the intake of medicine. Those teachings that you taught them during health education, they still [did not follow]. They continue doing their vices, eating unhealthy foods. I suppose those are the challenges.”

SUB-THEME 3.2: SOCIOECONOMIC AND PSYCHOLOGICAL BARRIERS

Table 5. Sub-theme: socioeconomic and psychological barriers

Verbatim Response:

To question(s):

What are the challenges encountered in delivering health teachings to diabetes mellitus patients?

R2:

“Oh, mostly our patient is [s]he is not in a high [social status]. I think lack of funding means the medicines they use to [lower] their sugars. ‘Uh,’ so the discipline.. discipline on how to take care of their diabetes.”

R7:

“Challenges I have encountered. Of course, the emotional and physiological aspect because mostly in our patients, at first [they are] in denial. They cannot accept that they have an illness; at the same time, ‘uh’ their non-compliance with medications starts there. So, we need—that is the biggest challenge I can see that we encounter. For instance, they [about the patient] restrain themselves or they do not believe their illness. Alternatively, lack—as if they are not adaptable in the chance that might occur if they have DM.”

**THEME 4: ADDRESSING CHALLENGES IN HEALTH TEACHING
SUB-THEME 4.1: CONSISTENT EDUCATION AND ENCOURAGEMENT**

Table 6. Sub-theme: consistent education and encouragement

Verbatim Responses

To question(s):

Based on question 4, how have you addressed

these challenges?

R1:

"Uhm, being consistent and uhm.. as I have said, highlighting the result of worst DM."

R4:

"Based on 4? Based on (question) number 4, uhh. Continuous education.. Continuous education because they are neglecting. They are not abiding by the rules of how they will maintain. Take medicine. Maybe because they are not complying with continuous education, you should keep repeating the education and training."

R6:

"Uhm, maybe.. Uhm, everyday health teaching and then the best is to include the family, especially those who are with them at the house because they are the ones that will guide the diabetic patient. What should they eat, what should they monitor, and what should be given? If insulin should be given, those. Because those (insulin) are taken as home medications, sometimes, its administration uses Lantus, or on 70/30, like that. That is why it is better to include the relatives at home."

SUB-THEME 4.2: MULTIDISCIPLINARY SUPPORT

Table 7. Sub-theme: multidisciplinary support

Verbatim Responses

To question(s):

Based on question 4, how have you addressed these challenges?

R5:

"Uhm, this is the nurses' responsibility and the doctors' encouragement. Maybe if you are in difficult situations, you should always ask for the help of the doctor plus the dietician of the institution."

THEME 5: ADAPTING STRATEGIES TO PATIENT NEEDS

SUB-THEME 5.1 PERSONALIZED HEALTH TEACHING

Table 8. Sub-theme: personalized health teaching

Verbatim Response:

To question(s):

How can you modify their health education methods or strategies to suit their patients' varied needs and learning styles?

R1:

"You modify it according to uhm.. the request. Okay, you modify it according to their, you know,

preference. So, I think you will adjust because not all patients will comply with what is stated in the program, okay? So maybe it varies depending on how you respond to it. Okay, so you have to do the adjustments yourself if you are going to do health teachings, knowing their preferences and what they like, okay.. to comply with the diabetes mellitus program."

R3:

"Hmm, maybe we should modify it here... uhm... so for DM patients, you know, when we provide them with health education, we should, perhaps, create something for them, like a diary or something they should follow daily to help reduce their sugar levels. They should check their sugar levels every day, and there should be instructions on what to do if it increases, like what to drink or what actions to take, right? So, we will create a diary or a guide for them to refer to if their sugar levels go up or down."

R7:

"Uhh, for me, of course, aside from having a one-on-one conversation with the patient, maybe giving them pamphlets or things they can read or refer back to regarding their illness to understand it better."

THEME 6: FAMILY INVOLVEMENT IN HEALTH TEACHING

SUB-THEME 6.1: ROLE OF THE FAMILY

Table 9. Sub-theme: role of the family

Verbatim Responses

To question(s):

How do you involve the family with diabetes mellitus in your health teaching process?

R1:

"Involving the family as well is, you know, uhm, doing the health promotion of uhm, like, for example, if there is one family who is already diagnosed of diabetes mellitus. So we know for a fact that diabetes mellitus is some, uhm, hereditary. Okay, so.. to be proactive, you know, in teaching the health to the family, of course, you needed to make them aware of what to do and what not to do. For example, consuming too much sugar may be controlled or lessened. Moreover, making them aware that they are at risk of developing diabetes mellitus because these are one factor that you know, they can have the disease."

R3:

"That is it. As I said earlier, the family needs to be involved. Whatever you teach the patient, you should also teach the family or relatives because if the patient does not follow and the relative agrees, the illness will only worsen. So, whatever you

explain to the patient, you should also explain to the relative. You should explain it to them simultaneously; that is how it should always be. Not just to the patient, because if you only explain it to the patient and the relative does not know, there might be times when the patient lies, saying, "Oh, they allowed me to eat that even though it is forbidden," right? So every time you say something to the patient while they are still in the hospital, you should also say it with their relative so all the prohibitions are avoided and the patient takes all the medicines. What time should the sugar level be checked? The relative should also know all of that so they are synchronized."

R5:

"Once you involve the family, 'uhh,' during the initial introduction to the patient about who you are and what your purpose is to the patient that is included in the initial introduction to the patient about who you are and what is your purpose to the patient that is included in the introduction to the relative because, of course, 'ahm,' like for those without companions, elderly, those who do not understand, you will explain to them. It is not just here. It is continuous until you involve them at home as they become the disciplinarian and the ones monitoring their patient. You will tell them that if you do not want frequent hospital visits, we need your help to monitor the patient and encourage them to make these modifications and take the medication for the regimen of diabetes mellitus."

R7:

"Nako, family members are critical regarding that because they are the first unit, so we do not know if that patient with DM might have it because of the family. Stress, lifestyle, food intake, so it is a considerable factor to involve the family members when it comes to a patient with DM."

THEME 7: IMPACT OF FAMILY INVOLVEMENT IN HEALTH TEACHING

SUB-THEME 7.1: IMPROVED DISEASE MANAGEMENT

Table 10. Sub-theme: improved disease management

Verbatim Responses

To questions:

Based on your answer to question 7, how does the family's involvement impact the patient's outcome?

R1:

"Of course, uhm, the impact is.. or the outcome is the uhh.. the improvement of controlling their diabetes mellitus, and not only controlling... but uhm, not developing themselves the diabetes mellitus as a disease. I mean to say, uh, they have

prevented that. They are at risk because it runs to the family."

R3:

"So, if the relative knows what you explained to the patient and what needs to be done for that patient, of course, the outcome will be better. As I said earlier, if one does not know if someone lied to them, the patient's condition will worsen. However, if both the family and the patient understand what you explained, the outcome will be better for the patient. They will become healthier; they will follow the medication and the daily routine you gave them. So the patient will feel better. That is all."

R5:

"Uhm,' for example, 'uhh,' like like example for me, right, we are not just nurses, we also have and had this situation where family members became patients too, like my uncles who have diabetes, and my grandmother, 'uhm,' you need to make the relatives understand that they have the biggest impact on health teaching and the patient because once the patient is in front of them, they will be tempted especially when they are restricted. As I said in the modification, it should be moderate, do not be strict; that is what you advise, do not strictly forbid them to eat that, give them at least one chocolate, right, one chocolate per week; if their sugar levels go down, at least one per day, like that, do not completely remove it because sometimes our diabetes patients feel deprived when you forbid them. Always make them understand that it should just be in moderation."

THEME 8: STRATEGIES TO PERSUADE COLLEAGUES TO ADOPT HEALTH TEACHING METHODS

SUB-THEMES 8.1: ROLE MODELING AND ADVOCACY

Table 11. Sub-themes: role modeling and advocacy

Verbatim Response:

To question(s):

How can you persuade other nurses to adopt your health teaching strategy? If not, why?

R1:

"Well, uhh, nurses should not be persuaded, you know, in giving health teachings because that is part of their role, that is part of their advocacies, okay. So, it should not be persuaded. It should be an in need, uhm, you know, uhm, character of the nurses. The time after the teaching, uhh, or health promotion, these are the advocacies that are natural to the nurses. It should not be told when to do that. Right after, uh, there is an explanation of the disease, highlighting the complications, highlighting the benefits, should be, you know, uhm,

given to the patient and the rest of the family for the compliance.”

R2:

“Ah, we can persuade nurses through health promotion or, uh, maybe through role modeling. I think that is the best way to persuade nurses.”

R4:

When you have those kinds of strategies in education training, that is a group effort, right? It is not just about conducting health teaching alone; you involve your colleagues, like nurses. When you go to the community to provide health teaching among people or within the community, it should not be just one person educating others. You may be able to educate one-on-one, but in a community setting, you should work together because there might be group discussions involving many patients or families. It would be best if you also involved other nurses.

R5:

“I think all nurses have the same strategies, but sometimes the government neglects health teaching because of the nurse-patient relationship. So, in our ward, we always emphasize studying the patient, understanding the patient's illness, and giving health teaching once they start medication. This way, the patient feels that you are not just there to watch over and give medications, but to involve yourself in how the patient can recover, not only in the hospital but continuously at home.”

THEME 9: EFFECTIVE TEACHING STRATEGIES
SUB-THEME 9.1: PATIENT-CENTERED
APPROACH

Table 12. Sub-theme: patient-centered approach

Verbatim Responses

To question(s):

What is the most effective teaching strategy you use most of the time?

R1:

“The teaching strategy that I always use most of the time is listening to the patient.. of uhm, you know what they need, w-what are their needs, what do they like, you know uhm, in terms of their preference of uhm, their treatment regimen. So because you know, you have to know all these things to adjust, uhm, because this is for their betterment, highlighting that is going, you know, to be better for them, this is going to be good for them.”

R2:

“Ah, we usually teach you how to care for yourself, which is number one. Personal hygiene, such as how to clean yourself, at the same time, exercise,

ahh.. Healthy living is included there. Exercise and advise them on how to treat. If in the group, they could avoid the worsening or other complications of the disease - Diabetes Mellitus. That is all.”

R3:

“Uh, sa.. teaching strategy is really uh, that is right.. that is what you have.. so with, uh, patient-centered with the help of those support systems. So, I do not know what that teaching strategy is called, but maybe, — So that, uh, more on what it is.. uhm, call it communication. So, of course, list--, of course, you must first explain to the patient what it all is. So, then you also have to listen to him. Of course, you need to know his feelings. Not everyone does anything; they adopt it immediately when the patient has one. So let us say I got sick; I cannot adapt to that immediately, so I need to listen to my patient no. What is becoming, what uh, what is it called, uh, is it becoming a challenge for her, or what is bothering her not to take the regimens given by the Doctor? So, uh, that.. so listen, what is that communication called? It is like... two-way — two-way communication, that is it for me. So you should not just mention to him, "This is this, this is this, this is how you do it," without hearing or knowing the patient's side. So when you know what is causing his problem, maybe he will not be able to buy medicine later. Can't you instruct him to come to the right part of the barangay or the community to give you support for your medicine there? Like this, there are, uh, it is called, the health center programs for his illnesses. So maybe later that is what they are saying. It is becoming a problem. So it would be best if you listened and had two-way communication. That is all.”

R7:

“One-on-one. That is right. Sometimes, they will not be open when you are in a group of patients. So, for me, especially when we have an encounter with the patient one-on-one, uhh, that is where you can assess your patient, and that is where you will know if he is compliant with his medications. Because what, uhh, they can not tell the truth when there are many people. It seems that when they are in a group, they can be so shy that when they find out that the others are compliant, I am not, so let me say that I am compliant like that. So it is better--one-on-one is better for me. The heart-to-heart--heart-to-heart talk with your patients because by that, you also establish your rapport with the patient, and by that, of course, uhm, because when he starts trusting you, he will listen to your health teachings. So the patient will be compliant. That is where you will build that being-- uhm, compassionate and, uhm, our empathy as nurses.”

DISCUSSION

The first theme emphasizes the importance of health teaching in raising awareness and empowerment of patients about Diabetes Mellitus. It emphasizes nurses' approaches to improve patient awareness, optimism, and active participation in managing the condition. As healthcare becomes cost-conscious, practitioners must demonstrate effective service to patients' educational needs. According to Friedman et al. (2019), health teaching for patient education is a set of organized educational activities that uses various strategies, including teaching, counseling, and behavior modification, to enhance patients' knowledge and health habits. Supporting Friedman, R1 stated "Health teaching to a patient is fundamental because, uhm, it would make them aware of their uhh.. healthy bad habits..." Patients who are informed are more likely to comply with treatment or regimens that manage their health problems better than those who are not educated.

The second theme shows nurses employing strategies to educate patients with diabetes mellitus, focusing on efficiency and success. The patient-centered approach, used by 2 out of 7 registered nurses, enhances awareness and self-management skills, improving patient outcomes. According to Gurmu et al. (2023), this strategy encourages the patients to manage Diabetes Mellitus as it gives empowerment to perform self-management. Quoting R3, "we make them understand what their disease is..." Also, R7 said "Of course, you need to consider or assess the patient. What are the factors that they need to know..." Registered nurses' strategy focuses on health teaching about Diabetes Mellitus, its causes, course, and required regimens, including diet and self-management. This strategy increases compliance and awareness among patients, influencing positive and negative outcomes. Quoting R5. "In one-on-one (health-teaching), you will also provide visual aids, 'uhm' – the technology in this generation, you can use your cellphones, right?" Also R6, "Uhm, that is it, maybe those videos. More on videos because, nowadays, many (people) are fond of Tiktok 'e,' so it is much better if those (videos) are short only." Visual aids like video animation and pictures are crucial for patients to understand diseases and treatments, providing concise, precise instructions and promoting a healthier lifestyle through self-management.

The third theme highlights challenges faced by nurses in teaching diabetes patients, including non-compliance, resistance, socioeconomic barriers, fear, concern, and distress, emphasizing the need for prevention and treatment strategies. As R1 said, "Challenges I could consider include the 'uh' and regimen compliance. Of course, they are hard-headed sometimes." Added by R3, "So, that is the biggest challenge if we persuade them they need to take this maintenance, right? Others may say, "Oh no, I will just.. take herbals."" As well as R4, "They

continue doing their vices, eating unhealthy foods. I suppose those are the challenges."" Patients resist medication and health teachings due to denial, belief in herbal medicines, difficulty maintaining a healthy diet, and lack of motivation to drink their medicines. Socioeconomic barriers, such as finances and medication supply, can pose challenges for registered nurses in health teaching, as they may deprive patients of necessary medications, leading to dismissal of maintenance in medication and lifestyle management.

The fourth theme entitled Addressing Challenges in Health Teaching highlights the nurses face challenges in teaching patients with Diabetes Mellitus, such as communication issues, patient participation, and healthcare system, but employ consistent education and multidisciplinary support strategies. Celik (2022) proved that the crucial responsibility of nurses is to ensure that the demanding requirements of patients with Diabetes Mellitus are met by providing health education. R1 stated, "Uhm, being consistent and uhm.. as I have said, highlighting the result of worst DM." Additionally, R4 reiterated that "Continuous education because they are neglecting." As the saying goes, consistency is the key; providing continuous and repetitive health education to patients reinforces the probability of them understanding the actual idea. Also, R6 stated, "Everyday health teaching and then the best is to include the family, especially those who are with them at the house because they are the ones that will guide the diabetic patient." Diabetes Mellitus is a lifelong condition that should have strict compliance with a healthy lifestyle. R5 believed that, "This is the nurses' responsibility and the doctors' encouragement. Maybe if you are in difficult situations, you should always ask for the help of the doctor plus the dietician of the institution." Collaboration with multidisciplinary healthcare providers can enhance patient outcomes and reduce hospital readmissions by developing a collective action plan focusing on their respective fields.

The fifth theme discusses how registered nurses use individualized teaching strategies to educate patients about diabetes, considering factors like knowledge, health literacy, cultural beliefs, and lifestyle. Healthcare systems need to incorporate patient-centered approaches for improved health outcomes. This is supported by the response of R1: "So you have to do the adjustments yourself if you are going to do health teachings, knowing their preferences and what they like." regarding patient preferences in implementing education, not all patients fit into standardized programs. Also, as R3 suggested, "we should, perhaps, create something for them, like a diary or something they should follow daily to help reduce their sugar levels." enhances patient involvement. Conversely, with the statement of R7, "maybe giving them pamphlets or things they can read or refer back to regarding their illness to understand it better.", the respondent agrees to

provide personalized counseling and print information to enhance the community's understanding of the issue through additional reinforcement.

The sixth theme entails how nurses emphasize family involvement in diabetes education, promoting self-care, balanced nutrition, exercise, blood sugar monitoring, medication adherence, mental health care, and risk-reduction practices to improve diabetes prognosis and management. As per R1, "Okay, so.. to be proactive, you know, in teaching the health to the family, of course, you needed to make them aware of what to do and what not to do." Supported by the claim of R3, "Whatever you teach the patient, you should also teach the family or relatives because if the patient does not follow and the relative agrees, the illness will only worsen.", nurses engage families in health teaching through strategies such as inclusive discussions with patients and families. R5 stated that, "It is continuous until you involve them at home as they become the disciplinarian and the ones monitoring their patient." Nurses note that family involvement is particularly crucial when patients are noncompliant, as family awareness enhances adherence to health recommendations. Also, R7 believed that "Family members are critical regarding that because they are the first unit." This approach ultimately prepares both patients and families for discharge, making family engagement essential in managing diabetes effectively.

The seventh theme explains that nurses should involve family members in diabetes education to enhance patient adherence, well-being, and treatment adherence, as they serve as primary caretakers, advocates, and support systems. R5 stated that, "we also have and had this situation where family members became patients too." and R1 believed that, "but uhm, not developing themselves the diabetes mellitus as a disease. I mean to say, uh, they have prevented that." These claims explain the role of family involvement in controlling existing diabetes and preventing its development in at-risk individuals. Both nurses consider the family a critical link. Ensure constant adherence to treatment plans. R3 stated, "However, if both the family and the patient understand what you explained, the outcome will be better for the patient." According to the study of HealthStream (2021), families must be given the authority to work as partners with us rather than as guests in the room.

The eighth theme talks about effective communication, trust, and understanding individual needs are crucial for successful diabetes education, with 3 out of 10 registered nurses using role modeling and advocacy strategies. Enforcement and support are among the critical components of nursing practice, as observed from the participants' answers. R1 claimed, "nurses should not be persuaded, you know, in giving health teachings because that is part of their role, that is part of their advocacies, okay. So, it should not be persuaded." The statement advocates for health teaching and promotion to be integral to the nursing profession, promoting

assertiveness over persuasion. This supports R2 in effectively persuading the nurses through role modeling and conducting health promotion that leads to patient care patterns. Healthcare programs play a crucial role in promoting professional identity and preparing a diverse workforce by providing role models and targeted support for underrepresented student groups. Fitzgerald et al. (2024). In the same sense, with the statement, "It is not just about conducting health teaching alone; you involve your colleagues, like nurses." R4 emphasizes the call for group work within the nurse's fraternity to enhance efficiency in health education, particularly within the community. R5 stated, "So, in our ward, we always emphasize studying the patient, understanding the patient's illness, and giving health teaching once they start medication." The socio-political analysis highlights nurses' role in patient education, emphasizing a patient-centered approach that considers patients' concerns, needs, preferences, and learning styles.

The ninth theme highlighted the effectiveness of health teaching strategies for patients with Diabetes Mellitus. Registered nurses adopted a patient-centered approach, focusing on individual benefits, knowledge assessment, and collaborative settings, empowering patients, promoting self-care management, and enhancing clinical outcomes, as supported by Goff et al. (2021). R1 reiterated that, "you know what they need, w-what are their needs, what do they like, you know uhm, in terms of their preference of uhm, their treatment regimen." Added by R7, "heart-to-heart talk with your patients because by that, you also establish your rapport with the patient." This empowers patients through self-management and independence. Powers et al. (2020) emphasized that self-management education enables patients to take full importance in monitoring their lifestyle to improve their condition. This statement is strengthened by Goff et al. (2021), who say that patient-centered self-management is associated with improved clinical outcomes and greater patient satisfaction.

CONCLUSION

This study aimed to understand the strategies employed by registered nurses in providing health teaching to patients with Diabetes Mellitus. The researchers utilized patient-centered health education methods, technology, visual aids, and family involvement. The participants' experiences validated the study's premise, emphasizing the importance of acknowledging patients' preferences and needs, recommending dietary plans, and involving the family in the teaching process. While the study does not introduce a new theory, it builds on existing health education frameworks by exploring the practical application of these strategies in nursing care. The study also highlights challenges that may

arise, such as beliefs, socioeconomic status, and psychological issues. To overcome these barriers, nurses should actively involve the family in the education process, using technology and visual aids to enhance patients' understanding of treatments, management, and lifestyle modifications. Building rapport with patients and understanding their life perspectives is essential for a successful patient-centered approach, which helps patients understand the course of their disease and make long-term lifestyle changes to manage their condition and prevent complications.

These findings align with core health education principles, including behavior modification and patient empowerment, and contribute to refining existing models of health education for chronic diseases like Diabetes Mellitus. A theoretical framework that explains the relationship between nurse-patient education strategies and patient outcomes would add depth to the study's contributions and guide future research in this area.

Conflict of Interest

There are no conflicts of interest among the authors.

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